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TOWNSEND SAN DIEGO

010/015

Appl. No. 09/732,164
Amdt. dated September 26, 2003
Reply to Office Action of March 26, 2003

PATENT**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1-62. (canceled).

63. (currently amended) A method of removing contaminants from influent water which comprises the steps of:

- (a) directing oxygenated ozone-treated water into an air saturator;
- (b) directing air at a pressure of between about 80 psi to about 150 psi into said air saturator to saturate said oxygenated ozone-treated water thereby creating a high-pressure oxygenated ozone-treated water mixture;
- (c) directing said high-pressure oxygenated ozone-treated water mixture to a blender;
- (d) at a pressure substantially lower than the pressure of said high-pressure oxygenated ozone-treated water mixture, directing influent water containing at least some contaminants to said blender;
- (e) mixing said high-pressure oxygenated ozone-treated water mixture and said influent water thereby creating a plurality of micro-bubbles and entraining particles in a resulting white-water mixture;
- (f) directing said white-water mixture to a separator;
- (g) effecting said directing of steps (c), (d), and (f) by a suction [device] pump attached between an outlet port of said blender and an inlet port of said separator.
- (h) causing said white-water mixture to rotate about an axis in said separator so that waste water, with entrained contaminants, is separated from said white-water mixture by coalescing along said axis, and decontaminated water separated from said white-water mixture away from said axis and from said waste water;
- (i) removing said waste water; and
- (j) removing said decontaminated water.

64. (original) The method according to claim 63 wherein said mixing is increased by causing turbulent flow over dimples in walls of said blender.

65. (original) The method according to claim 63 further including regulating pressure of water passing from said air saturator to said blender at a predetermined level at between about 80 psi to about 150 psi.

66. (original) The method according to claim 65 wherein said pressure is regulated to approximately 120 psi.

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67. (original) The method according to claim 63 further comprises collecting heavy particles at a lower end of said separator.

68. (original) The method according to claim 63 further comprises removing air bubbles and buoyant particles from a predetermined location at about an upper end of said separator.

69. (original) The method according to claim 68 further comprises removing air and any gases present from an upper end of said separator above said predetermined location.

70. (original) The method according to claim 69 further comprises filtering toxins from said any gases present.

71. (original) The method according to claim 63 further comprises filtering and reclaiming said waste water for additional treatment.

72. (original) The method according to claim 71 further comprises returning filtered waste water to said blender.

73. (original) The method according to claim 71 further comprises capturing recyclable waste in a filter and removing said recyclable waste for recycling.

74. (previously presented) The method according to claim 73 further comprises cleaning said filter and directing a resultant product to said blender.

75. (currently amended) A method of removing contaminants from influent water which comprises the steps of:

- (a) directing oxygenated ozone-treated water into an air saturator;
- (b) directing air at a pressure of between about 80 psi to about 150 psi into said air saturator to saturate said oxygenated ozone-treated water thereby creating a high-pressure oxygenated ozone-treated water mixture;
- (c) directing said high-pressure oxygenated ozone-treated water mixture, through a plurality of nozzles [on a wall of a mixing chamber of said blender,] to [said] a blender mixing chamber;
- (d) at a pressure substantially lower than the pressure of said high-pressure oxygenated ozone-treated water mixture, directing influent water containing at least some contaminants, through a plurality of slots [adjacent to said mixing chamber,] to said blender mixing chamber, said nozzles located above and in alignment with said slots;
- (e) mixing said high-pressure oxygenated ozone-treated water mixture and said influent water in said mixing chamber thereby creating a plurality of micro-bubbles and entraining particles in a resulting white-water mixture;
- (f) directing said white-water mixture to a separator;
- (g) causing said white-water mixture to rotate about an axis in said separator so that waste water, with entrained contaminants, is separated from said white-water mixture by

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coalescing along said axis, and decontaminated water separated from said white-water mixture away from said axis and from said waste water;

(h) removing said waste water; and

(i) removing said decontaminated water.

76. (previously presented) The method according to claim 75 further comprises effecting said directing of steps (c), (d), and (f) by a suction device attached between an outlet port of said blender and an inlet port of said separator.

77. (previously presented) The method according to claim 75 wherein said mixing is increased by causing turbulent flow over dimples in walls of said blender.

78. (previously presented) The method according to claim 75 further including regulating pressure of water passing from said air saturator to said blender at a predetermined level at between about 80 psi to about 150 psi.

79. (previously presented) The method according to claim 78 wherein said pressure is regulated to approximately 120 psi.

80. (previously presented) The method according to claim 75 further comprises collecting heavy particles at a lower end of said separator.

81. (previously presented) The method according to claim 75 further comprises removing air bubbles and buoyant particles from a predetermined location at about an upper end of said separator.

82. (previously presented) The method according to claim 81 further comprises removing air and any gases present from an upper end of said separator above said predetermined location.

83. (previously presented) The method according to claim 82 further comprises filtering toxins from said any gases present.

84. (previously presented) The method according to claim 75 further comprises filtering and reclaiming said waste water for additional treatment.

85. (previously presented) The method according to claim 84 further comprises returning filtered waste water to said blender.

86. (previously presented) The method according to claim 84 further comprises capturing recyclable waste in a filter and removing said recyclable waste for recycling.

87. (previously presented) The method according to claim 86 further comprises cleaning said filter and directing a resultant product to said blender.